

WHAT IS CLAIMED IS:

1. A composition comprising a human antibody or antibody fragment reactive with the factor IX/IXa Gla domain.
2. The composition of claim 1 wherein the antibody or antibody fragment is selected from the group consisting of
 - (a) a parent antibody or antibody fragment comprising:
 - a heavy chain variable domain comprising a CDR1, a CDR2 and a CDR3 amino acid sequence wherein the amino acid sequence of CDR1 is selected from the group consisting of:
 - SEQ ID NO: 10 and
 - SEQ ID NO: 21;
 - the amino acid sequence of CDR2 is selected from the group consisting of:
 - SEQ ID NO: 11
 - SEQ ID NO: 16
 - SEQ ID NO: 18
 - SEQ ID NO: 20 and
 - SEQ ID NO: 22;
 - the amino acid sequence of CDR3 is selected from the group consisting of:
 - SEQ ID NO: 12
 - SEQ ID NO: 17
 - SEQ ID NO: 19 and
 - SEQ ID NO: 23;
 - (b) a variant of (a) having an affinity of at least that of the parent antibody or antibody fragment for the human factor IX/IXa Gla domain; and
 - (c) a variant of (a) which competes with the parent antibody for binding the human factor IX/IXa Gla domain.

3. The antibody composition of claim 2 wherein the heavy chain variable region comprises SEQ ID NO: 10, SEQ ID NO: 11 and SEQ ID NO: 12.

4. The antibody composition of claim 2 wherein the heavy chain variable region comprises SEQ ID NO: 10, SEQ ID NO: 16 and SEQ ID NO: 17.

5. The antibody composition of claim 2 wherein the heavy chain variable region comprises SEQ ID NO: 10, SEQ ID NO: 18 and SEQ ID NO: 19.

6. The antibody composition of claim 2 wherein the heavy chain variable region comprises SEQ ID NO: 10, SEQ ID NO: 20 and SEQ ID NO: 12.

7. The antibody composition of claim 2 wherein the heavy chain variable region comprises SEQ ID NO: 21, SEQ ID NO: 22 and SEQ ID NO: 23.

8. The composition of claim 2 wherein the parent antibody or antibody fragment additionally comprises

a light chain (lc) variable domain comprising a lc-CDR1, a lc-CDR2 and a lc-CDR3 amino acid sequence wherein the amino acid sequence of the lc-CDR1 is selected from the group consisting of:

SEQ ID NO: 13 and

SEQ ID NO: 24;

the amino acid sequence of the lc-CDR2 is selected from the group consisting of:

SEQ ID NO: 14 and

SEQ ID NO: 25 and

the amino acid sequence of the lc-CDR3 is selected from the group consisting of:

SEQ ID NO: 15 and

SEQ ID NO: 26.

9. The antibody composition of claim 8 wherein the light chain variable region comprises SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15.

10. The antibody composition of claim 8 wherein the light chain variable region comprises SEQ ID NO: 24, SEQ ID NO: 25, and SEQ ID NO: 26.

11. The antibody composition of claim 8 wherein the heavy chain variable region comprises SEQ ID NO: 10, SEQ ID NO: 11 and SEQ ID NO: 12 and wherein the light chain variable region comprises SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15.

12. The antibody composition of claim 8 wherein the heavy chain variable region comprises SEQ ID NO: 10, SEQ ID NO: 16 and SEQ ID NO: 17 and wherein the light chain variable region comprises SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15.

13. The antibody composition of claim 8 wherein the heavy chain variable region comprises SEQ ID NO: 10, SEQ ID NO: 18 and SEQ ID NO: 19 and wherein the light chain variable region comprises SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15.

14. The antibody composition of claim 8 wherein the heavy chain variable region comprises SEQ ID NO: 10, SEQ ID NO: 20 and SEQ ID NO: 12 and wherein the light chain variable region comprises SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15.

15. The antibody composition of claim 8 wherein the heavy chain variable region comprises SEQ ID NO: 21, SEQ ID NO: 22 and SEQ ID NO: 23 and wherein the light chain variable region comprises SEQ ID NO: 24, SEQ ID NO: 25, and SEQ ID NO: 26.

16. Isolated nucleic acid encoding the antibody or antibody fragment of claim 1.

17. A vector comprising the nucleic acid of claim 16.

18. A host cell comprising the vector of claim 17.

19. A method of producing an antibody or antibody fragment comprising culturing the host cell of claim 18 under condition wherein the nucleic acid is expressed.

20. An article of manufacture comprising

(a) a container;

(b) a label on said container; and

(c) a composition comprising an antibody or antibody fragment of claim 1 contained within said container; wherein the composition is effective for treating a coagulation disorder and an optional label on said container indicates that the composition can be used for treating a coagulopathic disorder.

21. A method of treating a mammal comprising administering a therapeutically effective amount of a pharmaceutical composition comprising the antibody or antibody fragment of claim 1 to the mammal.

22. A pharmaceutical composition comprising the antibody or antibody fragment of claim 1.